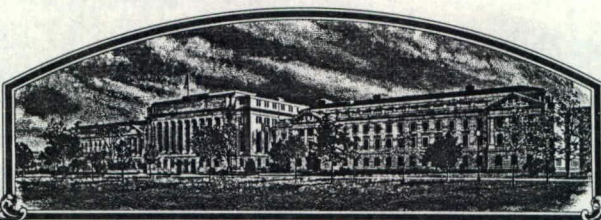


No.

8500012



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Cebeco-Handelsraad

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS *CERTIFIED* SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS *PRODUCED* BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BARLEY

'Efron'



Attest:

Kenneth H. Keen
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington
this 31st day of October in
the year of our Lord one thousand nine
hundred and eighty-five.

John R. Block
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION

FORM APPROVED: OMB NO.0581-0055

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1. NAME OF APPLICANT(S) Cebeco-Handelsraad		2. TEMPORARY DESIGNATION Cebeco 8002		3. VARIETY NAME EFRON	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) Blaak 31, P.O. Box 182, 3000 AD ROTTERDAM, Holland		5. PHONE (Include area code) 010-544911		FOR OFFICIAL USE ONLY PVPO NUMBER 8500012	
6. GENUS AND SPECIES NAME Hordeum vulgare L.		7. FAMILY NAME (Botanical) Gramineae		DATE 10/15/84 TIME 2:30 <input type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.	
8. KIND NAME Spring barley		9. DATE OF DETERMINATION november 1978		AMOUNT FOR FILING \$ 1,800 DATE 10/15/84	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) agricultural cooperative				AMOUNT FOR CERTIFICATE \$ 200.00 DATE 9/20/85	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Rotterdam, Holland				12. DATE OF INCORPORATION 01-07-1899	

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

International Seeds Inc.
P.O. Box 168, 820 First Street
HALSEY, Oregon 97348
U.S.A.

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED

- a. ☒ Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
b. ☒ Exhibit B, Novelty Statement
c. ☒ Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
d. ☒ Exhibit D, Additional Description of the Variety

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.)
☒ Yes (If "Yes," answer items 16 and 17 below) ☐ No

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☒ Yes ☐ No

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☒ Foundation ☒ Registered ☒ Certified

18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S. OR OTHER COUNTRIES?
Holland 07-01-1982 ☒ Yes (If "Yes," give names of countries and dates)
United Kingdom 23-11-1981 ☐ No
West-Germany 20-11-1981

19. HAVE RIGHTS BEEN GRANTED IN THE U.S. OR OTHER COUNTRIES?
United Kingdom - 17-4-1984 ☒ Yes (If "Yes," give names of countries and dates)
☐ No

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.
The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT Nationale coöperatieve aan- en verkoop- vereniging voor land- en tuinbouw b.a. CEBECO-HANDELSRAAD		DATE Rotterdam, 19-7-1984
SIGNATURE OF APPLICANT		DATE

NOTE: THERE HAS BEEN A CHANGE IN THE FEES.

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$1,000 fee (\$500 filing fee and \$500 examination fee) to U.S. Department of Agriculture, Agricultural Marketing Service, Livestock, Meat, Grain, and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. [See section 180.175 of the Regulations and Rules of Practice (as amended November 8, 1982).] Retrain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

Item

- 9 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 14a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 14b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 14c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 14d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 15 If "Yes" is specified (*seed of this variety be sold by variety name only as a class of certified seed*) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "No," he may change his choice. (*See section 180.16 of the Regulations and Rules of Practice.*)
- 16 See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

EFRON - spring barley

Exhibit A

13A Origin and breeding history of the variety

Efron was selected from the cross Aramir x F₁ (Aramir x Weibull 6165) made in 1972 by CEBECO-HANDELSRAAD. After multiplying the population of this cross for several years single plants were selected in the field.

This single plant selection was followed by earrow and earrow progeny selection combined with replicated yield trials.

This selection resulted in 5 identical earrow progenies which are used as a basis of the new variety EFRON.

Maintenance: The variety is maintained by means of line selection.

Multiplication scheme:

1. Breeders seed - grown at the plant breeding station.
2. pre-basic seed - grown and field inspected at the plant breeding station and/or at special multiplication farms.
3. basic seed - grown and field inspected at multiplication farms.
4. certified seed - grown and field inspected at multiplication farms.

Results of official DUS tests in The Netherlands (RIVRO), France (INRA-GEVES), United Kingdom (NIAB) and West Germany (Bundessortenamt) showed that Efron is a highly uniform and stable variety.

Commercial seed production is based on an advanced generation seed source, that is genetically very uniform.

Efron is genetically stable without any known variants. No variants were observed during seed production of the variety and in replicated progeny grow-out trials.

Exhibit BNOVELTY STATEMENT

Novelty of EFRON is based on the unique combination of characteristics as summarized in Exhibit C and Exhibit D (additional description of the variety).

EFRON most closely resembles the variety ARAMIR but differs from ARAMIR by showing a different specific resistance to mildew (*Erysiphe graminis* f.sp. *hordei*).

As evidence of the novelty of EFRON we enclose a report of tests conducted at the Cebeco Plant Breeding Station in which our research workers evaluated the specific resistance of EFRON and ARAMIR to various races of *Erysiphe graminis* f.sp. *hordei*.

Besides this clear difference in specific resistance to mildew EFRON differs from ARAMIR by showing a different ear attitude after flowering and a stronger anthocyanin coloration of the awn tips.

Annex

MILDEW TESTS - FALL 1983

Object: Evaluation of the reaction pattern of the spring barley varieties ARAMIR and EFRON after inoculation with different races of *Erysiphe graminis* f. sp. hordei.

Method: Tests were carried out in 4 replications in the greenhouse. The varieties were drilled in rows in cases filled with soil and were placed in isolation cages.

After emergence a source of inoculum (a small pot with 10 well sporulating plants) was placed in each of the isolation cages. The following races of *Erysiphe graminis* f.sp. hordei were applied:

<u>Mildew races</u>	<u>Virulence factors</u>
E 7500	VMlg, VMla ₁₂
E 4023	VMla ₁₂
AV 6530	VMla ₇ , VMl _{min}
V 7520	VMlg, VMl _{min}
AW 7510	VMlg, VMl _k , VMla ₇ , VMla ₉
AEV 7532	VMlg, VMl _k , VMla ₇ , VMl _{min} , VMla ₁₂ (isol. of Engledow India)

To judge the type of infection the following scale was used:

0 = no symptoms

I = necrotic dots

II = necrotic spots

III = necrotic spots with a sound spore-forming mycelium

IV = no necrotic spots - sound spore-forming mycelium

(necrotic dots or spots indicate a defensive reaction).

In type III the following sub-division was used:

III₁: few spore-forming on necrotic tissue

III₅: spore-forming on necrotic spots

III₉: rather much spore-forming on slightly necrotic (chlorotic) spots

Results:

<u>Variety</u>	<u>Repetition</u>	<u>E 7500</u>	<u>AW 7510</u>	<u>AEV 7532</u>	<u>E 4023</u>	<u>AV 6530</u>	<u>V 7520</u>
Aramir	1	IV	II	III ₉	0	II	II
	2	IV	II	IV	0	-	II
	3	IV	I	III ₉	0	II	II
	4	IV	I	III ₉	0	-	II

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<u>Variety</u>	<u>Repetition</u>	<u>E 7500</u>	<u>AW 7510</u>	<u>AEV 7532</u>	<u>E 4023</u>	<u>AV 6530</u>	<u>V 7520</u>
Efron	1	0	III ₃	0	0	0	0
	2	0	III ₉	0	0	-	0
	3	0	III ₅	0	0	0	0
	4	0	III ₇	0	0	-	0

From the above given list we can conclude that EFRON shows a reaction pattern which is different from ARAMIR. Unlike ARAMIR EFRON has a resistance to mildew coming from Monte Christo, in which the factors Ml_k and Mla_9 are present and closely linked.

UNITED STATES DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
 BELTSVILLE, MARYLAND 20705
OBJECTIVE DESCRIPTION OF VARIETY
BARLEY (HORDEUM VULGARE)

EXHIBIT C
(Barley)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S) Cebeco-Handelsraad	FOR OFFICIAL USE ONLY PVPO NUMBER 8500012
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. Box 182, Blaak 31 3000 AD ROTTERDAM, Holland	VARIETY NAME OR TEMPORARY DESIGNATION EFRON (Cebeco 8002)

Place the appropriate number that describes the varietal character of this variety in the boxes below.
 Place a zero in first box (i.e. or) when number is either 99 or less or 9 or less.

1. GROWTH HABIT:

1 = SPRING 2 = FACULTATIVE WINTER 3 = WINTER Early Growth: 1 = PROSTRATE 2 = SEMIPROSTRATE
 3 = ERECT

2. MATURITY (50% Flowering):

1 = EARLY (California Mariout) 2 = MIDSEASON (Betzes) 3 = LATE (Frontier)

No. of days Earlier than } 1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON
 No. of days Later than } 5 = PIROLINE 6 = PRIMUS 7 = UNITAN

3. PLANT HEIGHT (From soil level to top of head):

1 = SEMIDWARF 2 = SHORT (California Mariout) 3 = MEDIUM TALL (Betzes) 4 = TALL (Conquest)

Cm. Shorter than } 1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON
 Cm. Taller than } 5 = PIROLINE 6 = PRIMUS 7 = UNITAN

4. STEM:

Exertion (Flag to spike at maturity): 1 = 0 - 3 cm. 2 = 3 - 10 cm. Anthocyanin: 1 = ABSENT 2 = PRESENT
 3 = 10 - 15 cm.

NO. OF NODES (Originating from node above ground)

Collar Shape: 1 = CLOSED 2 = V-SHAPED 3 = OPEN Shape of Neck: 1 = STRAIGHT 2 = SNAKY
 4 = MODIFIED CLOSED OR OPEN 3 = OTHER (Specify) _____

5. LEAF:

Basal leaf sheath (seedling): 1 = GLABROUS 2 = PUBESCENT Position of flag leaf (at boot stage): 1 = DROOPING
 2 = UPRIGHT

Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY 3 = WAXY MM. WIDTH (First leaf below flag leaf)

CM. LENGTH (First leaf below flag leaf) Anthocyanin in leaf sheath: 1 = ABSENT 2 = PRESENT

6. HEAD:

Type: 1 = TWO-ROWED 2 = SIX-ROWED Density: 1 = LAX 2 = ERECT (Not dense)
 3 = ERECT (Dense)

Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY
 4 = OTHER (Specify) _____ 3 = WAXY

Lateral Kernels Overlap: 1 = NONE 2 = AT TIP Rachis (Hair on edge): 1 = LACKING 2 = FEW 3 = COVERED
 3 = 1/4 - 1/2 OF HEAD

7. GLUME:

Length: 1 = 1/3 OF LEMMA 2 = 1/2 OF LEMMA Hairs: 1 = NONE 2 = SHORT 3 = ~~LONG~~ ^{medium} 4 = long
 3 = MORE THAN 1/2 OF LEMMA

Hair covering: 1 = NONE 2 = RESTRICTED TO MIDDLE 3 = CONFINED TO BAND 4 = COMPLETELY COVERED

Awns: 1 = LESS THAN EQUAL TO LENGTH OF GLUMES 2 = EQUAL TO LENGTH OF GLUMES
 3 = MORE THAN EQUAL TO LENGTH OF GLUMES

Awn Surface: 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH

8. LEMMA:

- ☐ 5 Awn: 1 = AWNLESS 2 = AWNLETS ON CENTRAL ROWS, AWNLESS ON LATERAL ROWS
 3 = SHORT ON CENTRAL ROWS, AWNLETS ON LATERAL ROWS 4 = SHORT (less than equal to length of spike)
 5 = LONG (longer than spike) 6 = HOODED
- ☐ 3 Awn Surface: 0 = AWNLESS 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH
- ☐ 2 Teeth: 1 = ABSENT 2 = FEW 3 = NUMEROUS ☐ 1 Hair: 1 = ABSENT 2 = PRESENT
- ☐ 4 Shape of base: 1 = DEPRESSION 2 = SLIGHT CREASE ☐ 2 Rachilla Hairs: 1 = SHORT 2 = LONG
 3 = TRANSVERSE CREASE 4 = incomplete

9. STIGMA:

horse shoe

- ☐ 2 Hairs: 1 = FEW 2 = MANY

10. SEED:

- ☐ 2 Type: 1 = NAKED 2 = COVERED ☐ 1 Hairs on Ventral Furrow: 1 = ABSENT 2 = PRESENT
- ☐ 4 Length: 1 = SHORT (8.0 mm.) 2 = SHORT TO MIDLONG (7.5 - 9.0 mm.) 3 = MIDLONG (8.5 - 9.5 mm.)
 4 = MIDLONG TO LONG (9.0 - 10.5 mm.) 5 = LONG (10.0 mm.)
- ☐ 3 Wrinkling of hull: 1 = NAKED 2 = SLIGHTLY WRINKLED 3 = SEMIWRINKLED 4 = WRINKLED
- ☐ 1 Aleurone Color: 1 = COLORLESS (White or Yellow) 2 = BLUE

☐ ☐ PERCENT ABORTIVE + ☐ 5 ☐ 0 GMS. PER 1000 SEEDS

11. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant) 3 = acceptable - high level of field resistance

- | | | | |
|---------------------------------------|---|---|---|
| <input type="checkbox"/> 0 SEPTORIA | <input type="checkbox"/> 0 NET BLOTCH | <input type="checkbox"/> 0 SPOT BLOTCH | <input type="checkbox"/> 3 POWDERY MILDEW |
| <input type="checkbox"/> 3 LOOSE SMUT | <input type="checkbox"/> 0 BACTERIAL BLIGHT | <input type="checkbox"/> 0 COVERED SMUT | <input type="checkbox"/> 0 FALSE LOOSE SMUT |
| <input type="checkbox"/> 1 STEM RUST | <input type="checkbox"/> 1 LEAF RUST | <input type="checkbox"/> 0 SCAB | <input type="checkbox"/> 1 SCALD |
| <input type="checkbox"/> 0 AY | <input type="checkbox"/> 0 BSMV | <input type="checkbox"/> 0 BYDV | <input type="checkbox"/> OTHER (Specify) |

12. INSECT: (0 = Not tested, 1 = Susceptible, 2 = Resistant)

- | | | | |
|---|--|--|-------------------------------------|
| <input type="checkbox"/> 0 GREEN BUG | <input type="checkbox"/> 0 ENGLISH GRAIN APHID | <input type="checkbox"/> 0 CHINCH BUG | <input type="checkbox"/> 0 ARMYWORM |
| <input type="checkbox"/> 0 GRASS HOPPERS | <input type="checkbox"/> 0 CERIAL LEAF BETTLE | <input type="checkbox"/> 0 OTHER (Specify) | |
| HESSIAN FLY RACES } <input type="checkbox"/> 0 GP <input type="checkbox"/> 0 A <input type="checkbox"/> 0 B <input type="checkbox"/> 0 C
<input type="checkbox"/> 0 D <input type="checkbox"/> 0 E <input type="checkbox"/> 0 F <input type="checkbox"/> 0 G | | | |

13. CHEMICAL (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

- ☐ 1 DDT ☐ 2 OTHER (Specify) parathion

14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Aramir	Seed size	Aramir
Leaf size	Aramir	Coleoptile elongation	Aramir
Leaf color	Aramir	Seedling pigmentation	Aramir
Leaf carriage	Aramir		

REFERENCES: The following publications may be used as a reference aid for the standardization of character descriptions and terms used in this form:

1. Wiebe, G. A., and D. A. Reid, 1961, Classification of Barley Varieties Grown in the United States and Canada in 1958, Technical Bulletin No. 1224, U.S. Dept. of Agriculture.
2. Reid, D. A., and G. A. Wiebe, 1968, Barley: Origin, Botany, Culture, Winter Hardiness, Genetics, Utilization, Pests, Agriculture Handbook No. 338, U.S. Dept. of Agriculture. pp. 61 - 84.
3. Malting Barley Improvement Association, Milwaukee, Wisconsin, 1971, Barley Variety Dictionary.

COLOR: Nickerson's or any recognized color fan may be used to determine color of the described variety.

FORM LPGS-470-5 (8-80) (REVERSE)

Nationale coöperatieve aan- en verkoop-
 vereniging voor land- en tuinbouw b.a.

CEBECO-HANDELSRAAD

Origin

Crossing: Aramir x F1 (Aramir x Weibull 6165) in 1972

Plant

Growth habit at tillering:	intermediate
Basal leaf sheaths:	glabrous and weakly pigmented
Leaf size:	medium
Anthocyanin coloration of auricles:	medium to strong
Color of the leaves	medium green
Glaucosity (waxiness) of leafsheaths at heading:	strong
Exertion: (flag to spike)	medium (+ 5.5 cm)
Plantheight	medium (as Aramir)

Ear

Ear glaucosity:	medium
Number of rows:	two
Ear shape:	parallel (strap)
Ear length:	long (9.8 cm - 4 years average)
Presence of awns:	present
Awn length:	+ 5 cm longer than length of the ear
Anthocyanin coloration of awntips:	medium to strong
Ear density:	lax to very lax (D = 31.7)
Spiculation on the central nerve of awns:	present (+ 10 cm glabrous)
Spiculation of the margins of the awns:	total, medium size
Ear attitude at ripening:	semi recurved

Rachis

Size of first segment:	short and wide
Curvature of first segment:	medium to strong
Humping of segments (mid-third of ear):	weak to medium
Shape of segments (mid-third of ear):	straight and slightly flared
Hairiness of segment margins:	strong
Shoulder hairs:	strong
Hairs on concave surface:	absent
Interglume hairs:	absent

Sterile spikelet

Angle of sterile spikelet:	weakly divergent to divergent
Length of lemma:	long
Shape of tip	more or less rounded
Hairiness of lemma base:	weak
Spiculation of lemma (sterile spikelet):	very weak to weak
Colour of rachilla (sterile spikelet):	yellowish brown
Hairiness of rachilla (sterile spikelet)	weak

Grain

Grain type:	A
Rachilla hairtype:	long hairs (equal length along rachilla)
Presence of husk:	present
Anthocyanin coloration of the nerves:	strong
Spiculation on inner lateral nerves:	absent
Spiculation on outer lateral nerves:	very weak (sometimes a spicule)
Hairiness of ventral furrow:	absent
Lodicules:	long collar type (clasping) shape type IV
Shape of tip of palea:	long tip, slightly raised up at angle (jutting out)
Seasonal type:	spring type
DDT reaction:	slightly susceptible

$$\pm D = \frac{\text{total spikelets}}{\text{rachis length in mm}} \times 100$$

EFRON (spring barley)Authorization:

The undersigned: CEBECO-HANDELSRAAD
P.O. Box 182, Blaak 31
3000 AD ROTTERDAM
The Netherlands

declare that they are the owners of the new spring barley variety EFRON

They also declare that they authorize:

International Seeds Inc.
P.O. Box 168, 820 First Street
HALSEY, Oregon 97348
U.S.A.

to submit for and on behalf of them an application for Plant Variety
Protection Certificate in the U.S.A. for the spring barley variety EFRON

to prepare, sign and submit the documents necessary for that purpose and

to make all attendances upon the Plant Variety Protection Board relating
to the application for Plant Variety Protection Certificate for their
variety EFRON

Rotterdam, 19th July 1984

Nationale coöperatieve aan- en verkoop-
vereniging voor land- en tuinbouw b.a.

CEBECO-HANDELSRAAD

31 10

CEBECO HANDELSRAAD

P.O. Box 182, 3000 AD Rotterdam, The Netherlands Telephone +31 10-4544911 Telex 21398 cbco nl Fax +31 10-4113889
Bank: Rabobank Nederland, Account number 30.00.00.065 Giro bank account Rabobank 5658 stating 30.00.00.065
Address: Blaak 31, 3011 GA Rotterdam

Registered No. 54.571 Rotterdam

• BY AIRMAIL

U.S. Department of Agriculture
Plant Variety Rights Office
PGGI Building 001, room 335, Barc-West
BELTSVILLE
Maryland 20705
• U.S.A.

Dept:
WVDK/tg

Direct dial number: ROTTERDAM,
4544 504 September 22, 1989

Dear Sir/Madam:

You may already know that the Plant Breeding and Seeds Departments of Cebeco-Handelsraad have integrated into the new company CEBECO ZADEN B.V.

Therefore we kindly request you to transfer all varieties, for which an application has been made or which have been entered in the name of Cebeco-Handelsraad, to the name of CEBECO ZADEN B.V.

For the sake of clarity we give you once more the full address:

CEBECO ZADEN B.V.
P.O. Box 182
3000 AD Rotterdam
the Netherlands.

Under this cover you will find a list in which we mention all varieties involved according to the latest data that we have. We shall be pleased to receive your confirmation of transfer at your earliest convenience. Any possible invoice for charges due can be sent to Cebeco Zaden BV.

Yours faithfully,

CEBECO-HANDELSRAAD
Transferrer

Rotterdam,

CEBECO ZADEN B.V.
Transferee

Rotterdam,

Nationale coöperatieve aan- en verkoop-
vereniging voor land- en tuinbouw b.a.
CEBECO-HANDELSRAAD
.....

Enclosure

CEBECO ZADEN B.V.
Postbus 182, 3000 AD Rotterdam

Varieties of Cebeco Zaden B.V. in the USA

with PVP				
species	variety	name	date of grant	no. grant
Red fescue	Center	Center	88-01-15	8700077
Spring barley	Bellona	Bellona	85-07-26	8300085
	Apex	Apex	85-07-26	8300084
	✓ Efron	Efron	85-10-31	8500012
Perennial ryegrass	Elka	Elka	82-02-18	8100018
White pea	Miranda	Miranda	82-10-28	8100054
	Belinda	Belinda	86-03-31	8500013
Blue pea	Ricardo	Ricardo	85-08-30	8500014
	Maxi	Maxi	83-03-24	8000016
	Othello	Othello	86-03-31	8500015
application made				
Perennial ryegrass	EG 138	Surprise	88-12-19	8900062
Red fescue	Frc 137	Capitol	88-12-19	8900061
	CRU 499	Cindy		
	Frr 130	Claudia		
Kentucky bluegrass	Pp 112	Ampellia		
White pea	1415	Impala	89-1-26	8900081
	1416	Renata	89-04-04	8900145
Blue pea	Solara	Solara	88-01-29	8800056

